



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/510,438	10/07/2004	Bernd Bruchmann	3557-38	8484
23117	7590	06/19/2007	EXAMINER	
NIXON & VANDERHYE, PC			DICUS, TAMRA	
901 NORTH GLEBE ROAD, 11TH FLOOR			ART UNIT	PAPER NUMBER
ARLINGTON, VA 22203			1774	
MAIL DATE		DELIVERY MODE		
06/19/2007		PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/510,438	BRUCHMANN ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Tamra L. Dicus	1774	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

1)  Responsive to communication(s) filed on 10 April 2006.

2a)  This action is **FINAL**.                    2b)  This action is non-final.

3)  Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## **Disposition of Claims**

4)  Claim(s) 1-18 is/are pending in the application.  
4a) Of the above claim(s) 13-18 is/are withdrawn from consideration.

5)  Claim(s) \_\_\_\_\_ is/are allowed.

6)  Claim(s) 1-12 is/are rejected.

7)  Claim(s) \_\_\_\_\_ is/are objected to.

8)  Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

9)  The specification is objected to by the Examiner.

10)  The drawing(s) filed on \_\_\_\_\_ is/are: a)  accepted or b)  objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)  The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)  Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a)  All b)  Some \* c)  None of:  
1.  Certified copies of the priority documents have been received.  
2.  Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3.  Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1)  Notice of References Cited (PTO-892)  
2)  Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3)  Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 10-07-04.

4)  Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_ .  
5)  Notice of Informal Patent Application  
6)  Other: \_\_\_\_ .

**DETAILED ACTION**

***Election/Restrictions***

1. Restriction is required under 35 U.S.C. 121 and 372.

This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1.

In accordance with 37 CFR 1.499, applicant is required, in reply to this action, to elect a single invention to which the claims must be restricted.

Group I, claim(s) 1-12, drawn to a multilayer material.

Group II, claim(s) 13-15, drawn to a printing ink.

Group III, claim(s) 16-18, drawn to a printing varnish.

2. The inventions listed as Groups I-III do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons: The special technical feature does not provide a contribution over the prior art because the special technical feature is disclosed in US 2004/0097684 and USPN 6,818,699 and USPN 6,316,538.

3. During a telephone conversation with Bryan Davidson on May 17, 2007 a provisional election was made with traverse to prosecute the invention of I, claims 1-12. Affirmation of this election must be made by applicant in replying to this Office action. Claims 13-18 withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

***Claim Objections***

5. Claims 1-12 are objected to because they include reference characters that are not enclosed within parentheses.

Reference characters corresponding to elements recited in the detailed description of the drawings and used in conjunction with the recitation of the same element or group of elements in the claims should be enclosed within parentheses so as to avoid confusion with other numbers or characters which may appear in the claims. See MPEP § 608.01(m). Thus, the use of reference characters is to be considered as having no effect on the scope of the claims.

Claim 5 recites PET and PEN, which should also spell out the composition and not just its acronym or somewhere in the specification should the acronym be spelled out.

Claims 1, 11-12 use COOH, OH, COOR, KOH and should also use the word, not solely the acronym or somewhere in the specification should the acronyms be spelled out to avoid confusion.

***Claim Rejections - 35 USC § 112***

6. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-12 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement.

The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. The Examiner believes that independent claim 1 does not have the proper support in the original specification as filed because the specification does not provide any teaching or discussion on KOH, or the calculation to obtain the OH number or the acid number as claimed or its usage with Applicant's claimed multilayer material. See for instance, page 16, Table 1. Merely listing an OH number or Acid number is not a disclosure obtaining enough specificity to detail how one obtains such numbers, especially when the associated number is not correlated to any specific component(s) to yield those numbers/values. It appears since KOH is claimed, then at least the solvent KOH should be used in the examples to yield a KOH number/value. Since the KOH is not used, nor the -COOH or -OH groups, it begs the question how one produces a KOH value as claimed.

Claims 1-12 are rejected under 35 U.S.C. 112, first paragraph, as based on a disclosure which is not enabling. An acid or source for the -OH is critical or essential to the practice of the invention, but not included in the claim(s) is not enabled by the disclosure. See *In re Mayhew*, 527 F.2d 1229, 188 USPQ 356 (CCPA 1976). There is no KOH used, no OH groups are identified within the specification or claims for producing KOH values as recited in the claims.

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

8. Claims 1-12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1-12 contain no ordered structure, thus it is not clear exactly what layers are next to the others (see further above objection).

Claim 1 recites “said printing ink comprises as binder”, it is not clear if the ink comprises a binder or is used as a binder.

Claim 1 recites “the acid number”, and “the OH number” which lacks antecedent basis and while the carboxyl group –COOH is listed, it is not recited if the acid number is referring to perhaps carboxylic acids, but carboxylic acid is not the only class of organic compound that contains a carbonyl group. Thus, the source acid is missing from the polyester, which renders the claim indefinite.

Claims 8-9 do not contain language to where the barrier or adhesive layers are.

Claim 10 recites “one varnish layer as primer or protector”. It is not clear if the varnish layer comprises a primer or if the varnish is used as a primer, or what layer it is applied to.

### ***Double Patenting***

9. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the “right to exclude” granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting

ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

10. Claims 1-12 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-12 of copending Application No.

10/510747 in view of Anderson et al. The claims of both applications recite an ink using either hyperbranched polyurea and polyester, while the rest of the multilayer material is the same. Anderson teaches both hyperbranched polyurea and polyester, using the same OH groups, as equivalents (5:65-68, 6:1-10, 6:25-45). Thus it would have been obvious to one having ordinary skill in the art to use either polyurea (polyurethane) or polyester as Anderson teaches either polymer as a suitable condensation polymer for the coating used in polyolefin film coatings (5:65-68, 6:1-10, 6:25-45, 9:1-5, 25:38-60). Thus both applications are obvious over each other.

This is a provisional obviousness-type double patenting rejection.

### *Claim Rejections - 35 USC § 103*

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12. Claims 1-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kaczun et al. (WO 97/38849) in view of Kajimaru et al.

13. For purposes of examination and prior art purposes, the Examiner interprets the claims as following:

Kaczun teaches per instant claim 1, a multilayer material for producing packaging, comprising at least one film of a polymeric material (12, Fig. 1 and associated text, of polyolefin polyethylene (PE)), one print layer obtainable by printing or coating with a printing ink (14, Fig. 1 and associated text, printed ink), one barrier layer as claimed (10, Fig. 1 and associated text, perfume barrier odor), and one further film (11, Fig. 1 and associated text, of polyolefin polyethylene). Adhesives are used also adjacent to a second polymer layer to adhere a printed first layer, adjacent to the barrier layer (page 7, 2<sup>nd</sup> complete paragraph). The binder layer may comprise lacquer (embraces varnish).

Kaczun teaches polyethylene terephthalate (PET) may be used sandwiched between laminated of polyethylene, while costly, however, Kaczun still teaches it was known in the art to employ PET, and is thus an obvious choice.

Kaczun does not expressly teach wherein said printing ink comprises a binder at least one hyperbranched polypolyester containing functional groups selected from the group consisting of amino, OH, COOH and COOR groups as claimed with the recited numbers. Kaczun does teach water-proof properties and barriers for liquid perfumes (page 1).

Kajimaru teaches an aqueous dispersion coating binder (does not provide separation of ink and is an ink, 2:30-33, 7:40-45, 21:45-65) employed as ink or anchor or protective coats improving a variety of processing properties to a film. The binder is comprised of polyester resins containing carboxyl and hydroxyl groups in certain amounts; see further Kajimaru explaining "as acid components three or more functional groups may be added", thereby forming

the resultant product claimed having similar properties, 2:30-51, 3:20-33, 7:20-45, 8:30-45, 11:5-25, 21:35-68). The coat of Kajimaru also improves the properties of an anchor coat of a variety of films including metal ones. The acid value of the polyester is 8 to 40 mg KOH/g, falling within Applicant's range of 1-200 mg KOH/g (see Abstract, 2:35-40, 5:1-5). Kajimaru does not expressly state the OH number as recited per instant claim 1, however, it is considered inherent, expected, or an obvious modification, especially since the same acid number as a whole of the polyester is from 8 to 40 mg KOH/g as taught by Kajimaru and the same polyester copolymerized with hydroxycarboxylic acid and their ester-formable derivatives (forming a similar composition, having similar properties. See instant specification using hydroxydicarboxylic acid (OH and COOH groups) and their ester derivatives also on page 11, lines 1-20).

It would have been obvious to one having ordinary skill in the art to have modified the ink of Kaczun to use the binder as claimed of Kajimaru as it provides excellent processibilites, water-proofness (a property known in the art to improve upon as Kaczun disclosed at page 1) and solvent resistances applied to a film and also improves the properties of an anchor coat of a variety of films (1:5-15, 1:19-50, 2:30-33, 7:40-45, 11:5-30, 12:30-65, 21:35-65).

Claims 1, 3-12 are met.

Claim 2 is directed to process derived limitations (print layer printed directly) in a product claim. Even though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even

though the prior product was made by a different process.” *In re Thorpe*, 777 F.2d 695, 698.

Both Applicant's and prior art reference's product are the same.

Further to claims 10-11, Kaczun does not expressly teach further comprising a “varnish” layer.

Kajimaru however already teaches a variety of uses for his novel dispersion coating set forth above, as an adhesive or anchor film, or surface treatment, or as ink (see again 21:45-65). A varnish is a known vehicle for dispersants. Thus, employing the same composition (set forth above) used as a varnish, primer, or protective layer is an obvious modification and to intended use, affording little patentable weight.

It would have been obvious to one having ordinary skill in the art to have modified the Kaczun film to include a layer as claimed because Kajimaru teaches a variety of uses for his novel dispersion coating including as an anchor film, or surface treatment, or as ink as cited above. Furthermore, unless the reference teaches away from applying to both sides, it is obvious to provide the additional coating layer of Kaczun, motivated by the desire of providing an anchor or adhesive, and surface treatment to a layer. Additionally, the mere duplication of parts has no patentable significance unless a new and unexpected result is produced.

14. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kaczun et al. (WO 97/38849) in view of Kajimaru et al., and further in view of Peiffer et al.
15. The combination is relied upon for all that it teaches above.
16. The combination does not expressly teach PEN film as per instant claim 5.

17. Peiffer discloses PE, polyethylene naphthalate (PEN) and PET are equivalents used for the same purposes as material for film composites in packaging purposes (2:39-55, 3:1-10).

18. It would have been obvious to one having ordinary skill in the art to have modified the combination to substitute, use, or include PEN because Peiffer teaches it is an equivalent of PE used as material for film composites in packaging purposes (2:39-55, 3:1-10).

Claim 10-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kaczun et al. (WO 97/38849) in view of Kajimaru et al., and further in view of Anderson et al.

The combination is relied upon for all that it teaches above.

The combination does not expressly teach further comprising a varnish layer as per instant claims 10-11.

Kajimaru however already teaches a variety of uses for his novel dispersion coating set forth above, as an adhesive or anchor film, or surface treatment, or as ink (see again 21:45-65). A varnish is a known vehicle for dispersants. Thus, employing the same composition as a varnish, primer, or protective layer is an obvious modification to the Kaczun film.

Anderson teaches a similar dispersion coating used as a varnish, ink, adhesives, and coatings that are known vehicles for dispersions (Abstract) and applied to olefin films employed in packagings exhibiting an improvement of water and oxygen barrier properties (25:35-55).

It would have been obvious to one having ordinary skill in the art to have modified the combination to include a varnish as claimed because Anderson teaches a similar dispersion coating used as a varnish, ink, adhesives, and coatings that are known vehicles for dispersions (Abstract) and applied to olefin films employed in packagings (3:1-30, 2:45-68, 25:35-55,

Anderson). Furthermore, unless the reference teaches away from applying the coating to any side of a film, it is obvious to provide the additional coating layer of Anderson, motivated by the desire to improve water and oxygen barrier properties. Additionally, the mere duplication of parts has no patentable significance unless a new and unexpected result is produced.

19. Claims 1-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kaczun et al. (WO 97/38849) in view of Anderson et al.

20. For purposes of examination and prior art purposes, the Examiner interprets the claims as following:

Kaczun teaches per instant claim 1, a multilayer material for producing packaging, comprising at least one film of a polymeric material (12, Fig. 1 and associated text, of polyolefin polyethylene (PE)), one print layer obtainable by printing or coating with a printing ink (14, Fig. 1 and associated text, printed ink), one barrier layer as claimed (10, Fig. 1 and associated text, perfume barrier odor), and one further film (11, Fig. 1 and associated text, of polyolefin polyethylene). Adhesives are used also adjacent to a second polymer layer to adhere a printed first layer, adjacent to the barrier layer (page 7, 2<sup>nd</sup> complete paragraph). The binder layer may comprise lacquer (embraces varnish). Kaczun teaches polyethylene terephthalate (PET) may be used sandwiched between laminated of polyethylene, while costly, however, Kaczun still teaches it was known in the art to employ PET, and is thus an obvious choice. Claims 1-2, and 4-12 are addressed.

Kaczun does not expressly teach wherein said printing ink comprises a binder at least one hyperbranched polypolyester containing functional groups selected from the group consisting of

OH, COOR, or COOH groups. Kaczun does teach water-proof properties and barriers for liquid perfumes (page 1).

21. Anderson teaches an aqueous dispersion coating binder (does not provide separation of ink and is an ink, Abstract) employed as an ink or varnish or adhesive or coats improving a variety of processing properties to a film. The binder is comprised of an A and B polymer mix composition using hyperbrached polymers such as polyester resins comprising carboxyl, and hydroxyl groups (embraces hyperbranched polyester as claimed, Abstract, 2:40-68, 3:1-30, 3:50-60, 5:65-6:35). The binder coating of Anderson is applied to olefin films employed in packagings exhibiting an improvement of water and oxygen barrier properties (25:35-55).

The acid value of the polyester of Anderson is about 40 to about 200 mg KOH/g, falling within Applicant's range of 1-200 mg KOH/g (see Abstract, 2:40-68, 8:50-35, 6:25-60, 6:25-30). Anderson does not expressly state the OH number as recited per instant claim 1, however, it is considered inherent, expected, or an obvious modification, especially since the same carboxylic acid, and hydroxyl groups of the same polyester is used (2:40-68, 8:50-35, 6:25-60, 6:25-30) thereby forming a similar composition, see instant specification using hydroxydicarboxylic acid (OH and COOH groups) and their ester derivatives also on page 11, lines 1-20).

It would have been obvious to one having ordinary skill in the art to have modified the film of Kaczun to include an ink or varnish as claimed because Anderson teaches the dispersion coating is used as a varnish, ink, adhesives, and coatings applied to olefin films employed in packagings (Abstract, 2:40-68, 2:40-68, 8:50-35, 6:25-60, 6:25-30, 3:1-30, 3:50-60, 5:65-6:35, 25:35-55, Anderson). Furthermore, unless the reference teaches away from applying the coating to any side of a film, it is obvious to provide the additional coating layer of Anderson, motivated

by the desire to improve water and oxygen barrier properties. Additionally, the mere duplication of parts has no patentable significance unless a new and unexpected result is produced.

Claims 1-12 are met.

Claim 2 is directed to process derived limitations (print layer printed directly) in a product claim. Even though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process.” *In re Thorpe*, 777 F.2d 695, 698.

Both Applicant's and prior art reference's product are the same.

22. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kaczun et al. (WO 97/38849) in view of Anderson et al., and further in view of Peiffer et al.

23. The combination is relied upon for all that it teaches above.

24. The combination does not expressly teach PEN film as per instant claim 5.

25. Peiffer discloses PE, polyethylene naphthalate (PEN) and PET are equivalents used for the same purposes as material for film composites in packaging purposes (2:39-55, 3:1-10).

It would have been obvious to one having ordinary skill in the art to have modified the combination to substitute, use, or include PEN because Peiffer teaches it is an equivalent of PE used as material for film composites in packaging purposes (2:39-55, 3:1-10).

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tamra L. Dicus whose telephone number is 571-272-1519. The examiner can normally be reached on Monday-Friday, 7:00-4:30 p.m., alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rena Dye can be reached on 571-272-3186. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Tamra L. Dicus  
Examiner  
Art Unit 1774

June 3, 2007



RENA DYE  
SUPERVISORY PATENT EXAMINER  
AU 1774